



**Model:**

**DT-1000B**

**(STANDARD VERSION)**



**User-/service manual**



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## IMPORTANT SAFETY INSTRUCTIONS:

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### **Please follow these precautions when using this product:**

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1. Read carefully through and follow the instructions given in this manual
2. Pay attention to all warnings.
3. Installation must be done in accordance to this manual.
4. Protect and avoid the power cable from being walked on, driven over etc.. Do not bend the power cable close to the connections.
5. Use only original spare parts approved and recommended by Delitek AS.
6. Qualified personnel must perform repairs and services.
7. **WARNING:** Do not expose the el-locker or el-engine with direct spurt of flushing water.
8. The compactor must be placed in an environment that has an operating temperature between minimums -25 degrees Celsius to maximum 40 degrees Celsius (minimum -13 to maximum 104 degrees Fahrenheit).
9. **WARNING:** The compactor is usually transported horizontally, packed in a wooden transport frame (ISPM#15). The transport frame is lifted/relocated by using a forklift or a jack-trolley by the indicated lifting pockets. If the bale compactor needs to be lifted after the compactor is unpacked, this must be done with certified lifting straps around compactor the house.
10. **WARNING:** Do not lift the compactor by using holes on the compactor house or other parts of the compactor that is not suited for a lifting operation.
11. **WARNING:** The safety distance for the compactor-operator must be at least 1 metre. No persons must be standing in front of the compactor opening during the compaction cycle.
12. The compactor is designed to compress recyclable materials such as paper, plastic, paperboard, carton, PVC materials etc.
13. **WARNING:** Waste that is considered as "hazardous" or "special category waste" must never be deployed or compressed in the container. Because of fire and explosion hazard, never deploy hot ashes or any type of gas domes into the bale compactor.
14. Ensure that the control panel and the area around the compactor have sufficient lighting according to working environment law at site.
15. Qualified personnel must perform a function test of security switches/emergency switches at regular intervals. See chapter 6 for service/maintenance of the compactor. If a malfunction appears when the system is running and pressurized, contact Delitek AS to get a description on how to get the pressure balanced.
16. The placing of the waste compactor to be such that:
  - a) Escape routes are adequate and do not impede escape from hazards which are described in the vessel/ offshore facility manual.
  - b) Place for operating the compactor gives adequate attention towards alarm signals and PA announcements.
  - c) Necessary information, training and signboards to be provided by the responsible officer onboard.

**WARNING!** The standard version of DT-1000B must be installed in an unclassified zone onboard ships or offshore rigs. Only Ex-proof versions of the Delitek compactors can be used in hazardous areas.

**Note: All following dimensions are in metric millimetres.**

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## 1.0 INSTALLATION INSTRUCTIONS

### 1.1 Installation of the bale compactor to steel or wooden deck.

Before installation: Note that the bale compactor must be placed in an environment with operating temperatures between minimum -25 degrees Celsius to maximum 45 degrees Celsius (minimum -13 to maximum 113 degrees Fahrenheit). Ensure that the control panel and the area around the compactor have sufficient lighting according to working environment law at site. In addition, each country's legislation and Health, Environment & Safety regulations regarding operation of this kind of products must be followed.

#### Installation:

If the compactor is installed on board a ship or offshore installation, the mounting brackets must be welded to a steel surface or alternatively mounted to wooden deck with 8mm bolts.

**WARNING:** It is very important to cover up the stainless steel surface on the waste compactor in order to avoid spatter from the welding onto the steel. Welding and work with angle grinders nearby the bale compactor must always be avoided as this will damage the protective oxidizing coating on the waste compactor. This again will cause surface corrosion.

Lifting of the bale compactor must be done with certified lifting straps around the compactor house only. Do not attempt to lift the bale compactor by using holes on the compactor house or other parts of the compactor that is not suited for a lifting operation.

#### We recommend the following mounting procedure:

- 1) Place the bale compactor exactly where it is planned to be installed.
- 2) Align the mounting brackets to the corners of the waste compactor. The mounting brackets are then spot welded onto deck.
- 3) Remove the upper nuts on mounting brackets (see fig. 1)
- 4) The bale compactor is lifted aside and covered to avoid splatter from welding etc.
- 5) The mounting brackets are all welded to the steel surface.
- 6) The compactor is then lifted in position again and carefully placed upon the mounting brackets.
- 7) Please check that the waste compactor is levelled to the deck. If necessary adjust the bale compactor by turning the lower nuts on the mounting brackets.
- 8) Replace the upper nuts on the mounting brackets.

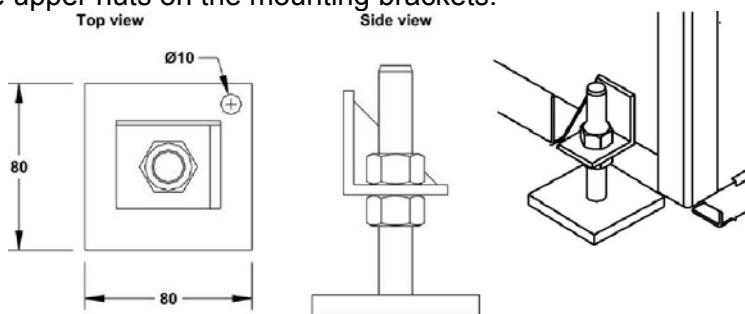


Figure 1. Mounting brackets

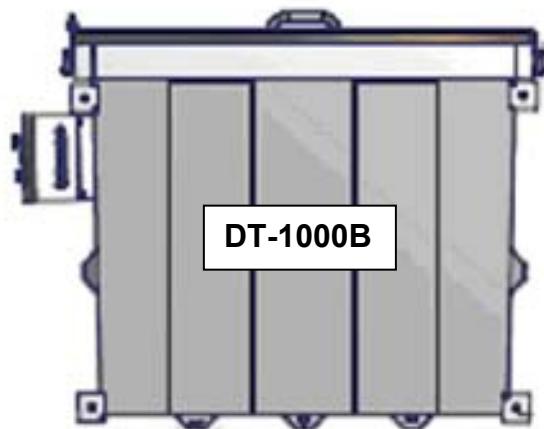


Figure 2. Sketch DT-1000B, bottom view of mounting brackets

## 1.2 Connection to electric supply

**Connection of el-supply must be done by a qualified electrician.**

Be sure to check that the voltage specified for the waste compactor complies with the el-supply at site. Check the voltage specification on the compactors nameplate and on the attached Factory Acceptance Test sheet.

**Note:** guide tubes, nipples, bushings, gaskets and sealing on the el-locker should be inspected during installation. This equipment must also be checked during maintenance and function tests of the compactor. Check for damages on door gasket or water leakages into the el-locker. The el-locker must always be closed (except from maintenance purposes).

## 1.3 Checking phase/ el-motor direction of rotation

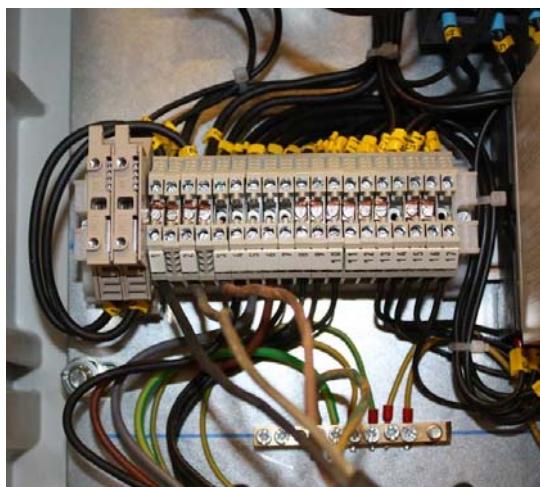


Figure 3. Connection terminals

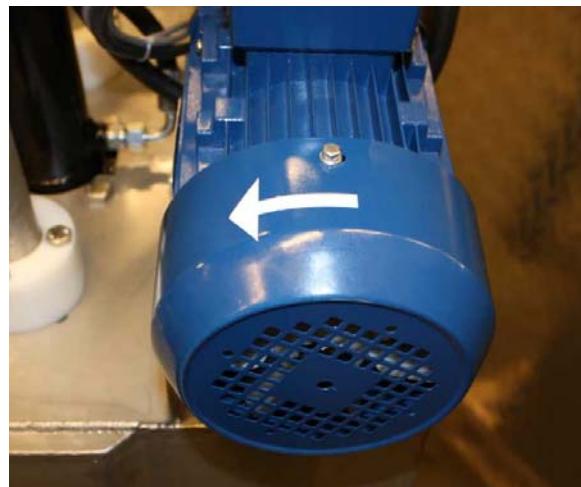


Figure 4. Direction of rotation

The 3 phase main el-supply is connected to the connection terminals 1, 2 & 3 as showed in fig. 3. After the connection of the el- wires, it is crucial to check the direction of rotation of the el-motor. If the connection is done correct, the el-motor will turn in the same direction as the arrow indicates, counter clockwise (see fig. 4). If the el-motor turns in the opposite direction the phases are wrongly connected. The motor will start, but the hydraulic system will not function properly. Please swap wires of terminals 1, 2 & 3 in order to correct this. To visually inspect the direction of rotation you will need to remove the cover for the motor and hydraulic power pack. See section 1.5 to see how this is done

## **1.4 Changing the electric configuration**

Normally, the compactor is configured for either **220V** or **380~440VAC** (480VAC with special transformer). However, the electric configurations can be changed afterwards from one to the other option. This procedure must always be performed by a qualified electrician.

**WARNING!**

Be sure to completely disconnect the el-supply to the compactor before rewiring starts.

**Two important procedures must then be performed:**

1. The el-motor must be rewired from "Y" (440V) to "Δ" (220V) configuration or vice versa , by rearranging the jumpers in the junction box on top of the el-motor. See also diagram in chapter 5, section 6.

Remove the four screws in the lid on top of the el-motor and remove the lid completely (see fig. 5). Arrange the jumpers according to the selected voltage. ("Y" (440V) or "Δ" (220V) and diagram in chapter 5, section 6.

2. The connections for the transformer for 380-440V voltages must be checked and reconfigured if necessary before el-supply is connected again (see fig. 6). The transformer is located inside the el-panel. All components in the el-panel are running on 220V only. The transformer is used for transforming input voltages of 380~440V (480V) down to 220V for the components in the el-panel.

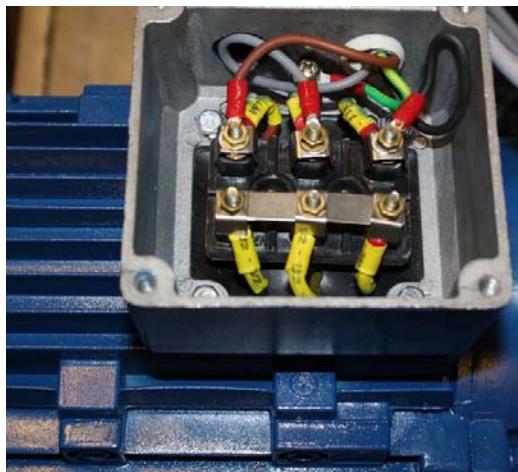


Figure 5. Y- "Star" configuration



Figure 6. Transformer bypass

- a) If the input voltage is 380~440V (480V), the el-supply for the el-panel must be connected to the 220V output at the top of the transformer. The jumpers on the el-motor must be set for "Y" STAR (440V) configuration according to Paragraph 1.
- b) If the input voltage is 220V, the transformer must be bypassed. Fig. 6 shows a bypassed transformer. The el supply to the el-panel is parallel connected to the input el-supply. I.e the voltage is not passing through the transformer. The jumpers on the el-motor must be configured for "Δ" Delta (220V) configuration according to paragraph 1.

3. When the reconfiguring of the el-system is completed, please reattach the cover for the hydraulic power pack and re-connect the waste compactor to the selected el-supply.

See also **chapter 5** for connection diagrams and schematics regarding rewiring.

**WARNING!**

THIS PROCEDURE IS NOT POSSIBLE TO PERFORM FOR COMPACTORS  
DELIVERED WITH 660~690V motors.

## 1.5 Final preparation

### IMPORTANT INFORMATION!

The hydraulic power pack is delivered with an airtight temporary filling cap (see fig 7) in order to avoid oil spill during transport.

**To avoid damages or breakdown of the hydraulic system, it is necessary to replace the temporary filling cap with the enclosed standard dipstick, before the compactor is set into normal operation.**

The temporary filling cap is located on top of the hydraulic oil tank on the el-motor (see figure 7).

Replace the airtight filling cap with the enclosed standard dipstick that should be found inside the el-panel.

**NOTE:** If the dipstick is missing from the package, please contact Delitek AS immediately. See chapter 8, contact information.

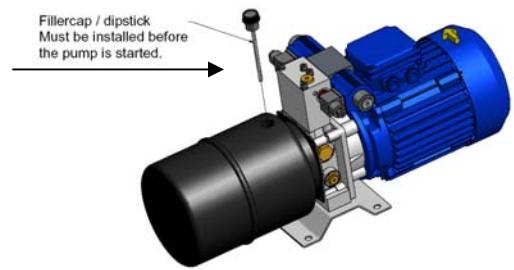
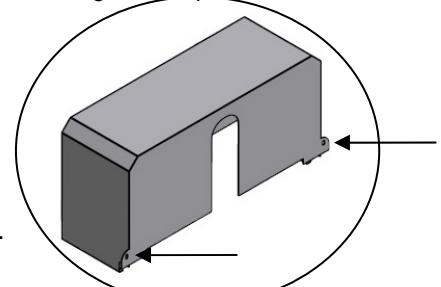


Figure 7. Dipstick



### Checking hydraulic oil level:

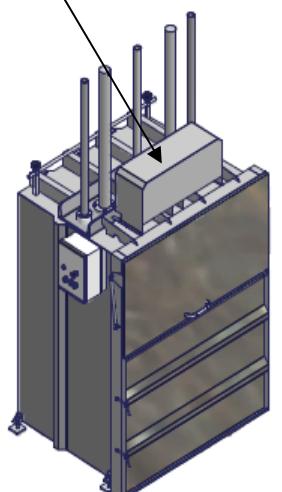
Disassemble the motor cover by unfastening the two nuts/bolts that keeps it in place (see figure 7).

Replace the airtight filling cap with the enclosed standard dipstick.

Check the oil level in the hydraulic oil tank. The oil level should normally be between 55mm and 65mm up on the dipstick in the hydraulic oil tank.

Start the bale compactor and run the piston to its outer (lowest) position and back again. Check the oil level again and refill if necessary. Oil with specifications similar to Nuto H32/Esso Univis N32 or equivalent must be used.

Avoid spill of hydraulic oil and also avoid the hydraulic system to be exposed for dust and dirt during maintenance of the hydraulic system. Use certified protective clothing and equipment according to working environment law at site. In addition, each country's legislation regarding operation of this kind of products and Health, Environment & Safety regulations must be always followed.



### IMPORTANT INFORMATION!

After installation, the compaction cycle should be run approximately 10 times (without waste in the compaction chamber). This is to ensure that there is no air trapped in the hydraulic system.

## **1.6 Installation procedure for detachable manometer**

The manometer is from the factory enclosed inside the el-panel (deliveries from February 2007 and beyond) together with the dipstick for the hydraulic tank and FAT (Factory Acceptance Test) certificate. Hydraulic pressure is preset to 160Bar for the DT-1500B model with two pistons, and should not be altered without authorization from Delitek AS.

The manometer is enclosed inside the el-panel.

### **Installation procedure for checking the hydraulic pressure:**

1. Locate the detachable manometer inside the el-panel.
2. Switch off the main power supply to the waste compactor.
3. Disassemble the motor covering by unfastening the two-nuts/bolts that keeps it in place (see figure7).
4. Locate and detach the protection cap on top of the hydraulic power pack (see fig. 8).
5. Attach the manometer firmly on the screw thread coupling (see fig. 9).
6. Run a few compacting tests with a container fully loaded with waste. Read out the manometer when the waste compactor reaches full pressure during the compaction cycle. If the hydraulic pressure for some reason not conforming to the preset value from the factory, please contact Delitek AS. Do not attempt to adjust the pressure without authorization from Delitek AS.
7. To prevent from damages on the manometer, it must be detached again right after the testing procedure and stored in an appropriate place.
8. Attach the motor covering again.



Figure 8. Protection Cap



Figure 9. Manometer

### **IMPORTANT INFORMATION:**

To prevent the manometer from being damaged, please detach it again after the testing procedure is completed and store it in an appropriate place.

The hydraulic pressure is preset from factory. The pressure is normally 160 Bar for DT-1500B.

## **1.7 Disassembling the compactor**

Disassemble the compactor in the opposite order to which it has been assembled.

## **1.8 Pre- installation checklist**

- Place the bale compactor package as close as possible to the mounting area.
- The compactor is normally packed on a wooden transport frame (ISPM#15) and covered in plastic. Unpack the bale compactor and remove all crating and plastics. Check for any damages.
- The compactor can be moved by using a jack-up trolley or fork-lift. In addition, lifting equipment such as a crane may be used, but note that certified lifting straps around the compactor house must be used. Do not attempt to lift the compactor by using any holes on the compactor house or other parts of the compactor that is not suited for a lifting operation.
- Place the compactor on the exact mounting position. See section 1.1 for mounting details.
- Open the el-panel and check that it contains the standard dipstick for the hydraulic oil tank and the manometer for service/checks of hydraulic pressure. Contact Delitek AS if these items missing. See sections 1.5 and 1.6 for installation procedures for dip-stick and manometer
- An authorized electrician must connect the compactor to the onboard el-supply. See section 1.2 and 1.3. Please check that the compactors el-specifications comply with the onboard el-supply.
- The temporary transport cap on the tank for the hydraulic oil must be replaced with standard dipstick found in the el-locker. See section 1.5 for this procedure.
- Check the rotating direction on the el-motor according to section 1.3. If the el-supply is correctly connected, the el-motor will rotate counter clockwise according to the arrow symbol on the el-motor.

**CONGRATULATIONS WITH YOUR NEW WASTE COMPACTOR!**

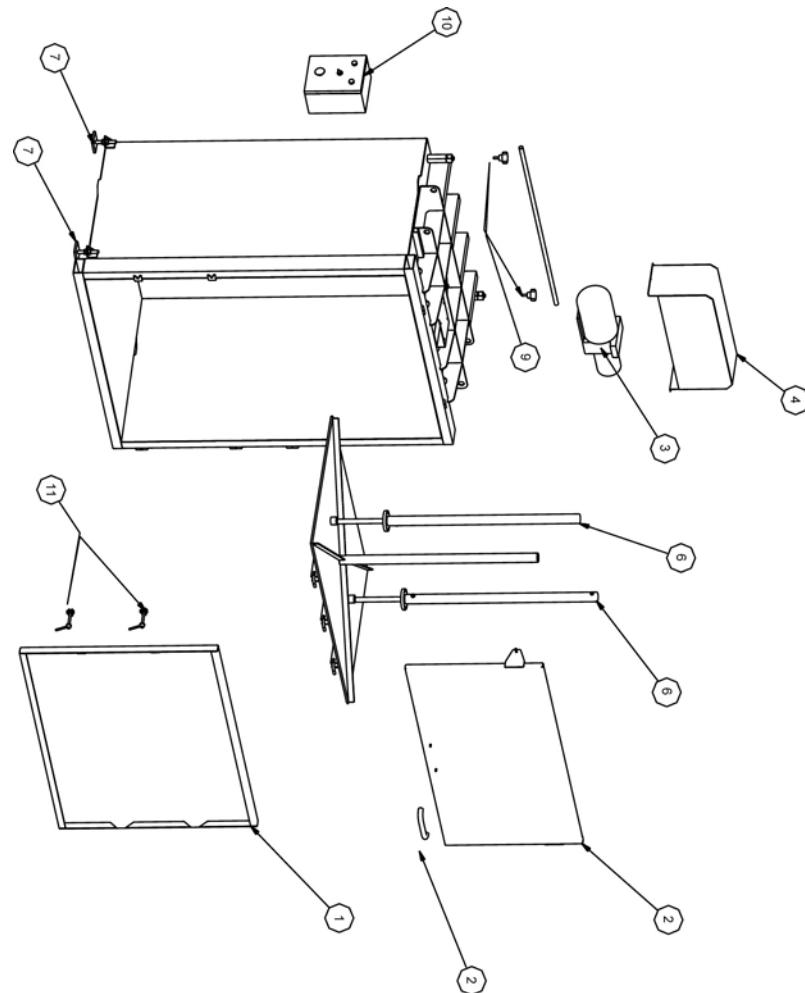
## 2.0 OPERATING INSTRUCTIONS

### 2.1 Instructions for use (Quick start)



Figure 10. Instructions for use DT-1000B

## 2.2 List of components DT-1000B



<b>List of components</b>		
<b>Art.</b>	<b>NOs.</b>	<b>Description</b>
<b>1</b>	<b>1</b>	<b>Door</b>
<b>2</b>	<b>1</b>	<b>Loading hatch</b>
<b>3</b>	<b>1</b>	<b>Hydraulic power pack</b>
<b>4</b>	<b>1</b>	<b>Power pack cover</b>
<b>5</b>	<b>1</b>	<b>Press plate complete</b>
<b>6</b>	<b>2</b>	<b>Cylinder</b>
<b>7</b>	<b>4</b>	<b>Mounting bracket</b>
<b>9</b>	<b>2</b>	<b>Locking knob</b>
<b>10</b>	<b>1</b>	<b>El-panel</b>
<b>11</b>	<b>2</b>	<b>Door lock</b>

Figure 11. Delitek DT-1000B bale compactor, list of components.

## **2.3 Installation of VG-straps**

The Delitek DT-1000B bale compactor has 2 VG-strap rolls for strapping bales (included in the delivery). The VG-straps are installed on the magazine bar at the rear side on top of the compactor (see fig. 12).



*Figure 12. VG-strap magazine bar*

When installing/replacing the VG-strap rolls, please follow the procedure as described below:

- Step 1: Loosen the two locking knobs on the magazine bar. Slide the bar to the left or right and thread the 2 VG-strap rolls onto the bar. Mount the magazine bar again and tighten up the locking knobs.
- Step 2: Loosen the ends from the VG-strap rolls and tread the VG-straps through the holes on top of the compactor house, right beneath the magazine bar (see fig. 6).
- Step 3: Open the compactor door and stretch the VG-straps further at the rear wall inside the press chamber.
- Step 4: Standing in front of the compactor: stretch the VG-straps all the way down to the bottom of the compactor house and further over the compactor floor. Ensure that the VG-straps reach approximately 20 cm. beyond the front of the compactor floor (you will need this when it is time to strap the bale).

**Note: See chapter 8 for ordering information for VG-straps.**

## 2.4 Operating the compactor

**Note! The control panel (el-panel) must be connected and controlled by a qualified electrician before use. All cable-glands and gaskets should also be inspected before first use and also with regular intervals (see also chapter 6)**

The DT-1000B is designed to compress bales of recyclable materials such as paper, plastic, paperboard, carton, PVC materials etc. The DT-1000B compactor is equipped with an ejector frame device for easy unloading of bales (see fig. 13).



Figure 13. Ejector frame.

For best results and for keeping the bale firmly together it is recommended to start with a bigger cardboard flake at the bottom of the compactor house.

Note: It is also recommended to finish the bale by placing a cardboard flake on top of the bale when it is ready for strapping, for the same reason as mentioned above.

The compactor is now ready to compress bales.

**Note! In order to let the compactor build up sufficient pressure, you must first fill the press chamber with waste (see *important safety instructions, point 12*) before running the compaction cycle. Repeat the procedure until the bale has reached the desired size.**

Close the compactor door and remember that the two door-locks always must be secured when the compactor is being operated. The compactor has an emergency switch in the loading hatch that not allows operation as long as it is open.

Start the compactor/aggregate by pushing the **start** button in 2-3 seconds (see fig. 13). The compactor will now run through the compaction cycle. If the compactor is switched off by using the **emergency** switch, **stop** button, or if the safety switch in the loading hatch is triggered, the press plate will return to its upper position and the system will reset. The control lamp (voltage on) is lit whenever there is voltage coming into the el-panel.



Figure 13. El-panel

The operator must visually check the size of the bale. The bale is considered finished and ready for strapping when the quantity of compacted waste reaches the lower part of the loading opening. However, it is the operator that decides the final size of the bale. When the compactor is approaching fully loaded, the operator will discover that the unit builds up pressure earlier in the compaction cycle. This is also an indication that the bale is ready to be deployed. Press the **stop** button to stop the compaction cycle and let the press plate return to its upper position. Unlock the two door locks and follow the strapping procedure that is described in section 2.5.

If waste with a high degree of expansion is compacted, it is recommended to push the **STOP** switch (see fig. 13) after the compactor has built up pressure in its lower position. Leave the press plate in its lower position as long as possible. This will remove any air pockets in the waste. By doing this you will also achieve a higher degree of compaction.

**WARNING:** In case of an accident, the emergency switch must be pushed immediately, so that the electric power is being cut. In order to let the hydraulic piston return to its upper position again, reset the unit by pushing the start button.

## **2.5 Strapping the bale**

When the bale is ready for strapping, please follow the procedure as described below:

- Step 1: Run the press plate to its upper position (see section 2.4).
- Step 2 Pull the VG-straps towards you and stretch them over the front of the bale.
- Step 3: Cut the VG-straps to the desired length. Ensure that the VG-straps have enough length (see section 2.3, step 4) in order to reach and tie them up with the VG-straps that already lies in front of the bale.
- Step 4: Tread the loose ends of the VG-straps through the channel iron under the press plate and pull them towards you to remove any slack.
- Step 5: Close the hatch and secure the door. Run the compaction cycle and press the **stop** button when the compactor reaches maximum pressure on the bale.
- Step 6: Open the door and tie together the VG-straps (see two alternatives below).
- Step 7: The compactor is equipped with an ejection frame (see fig. 13) for easy unloading of bales from the press chamber. When the compaction plate is in its lowest position: loosen the loop that is attached to the hook at the rear wall inside the press chamber. Attach the loop to the hook that is placed at the rear side on top of the press plate. Run the compactor in order to move the press plate to its upper position.

**Warning: Be sure that nobody stands in front of the compactor during this procedure.**

The ejection frame will now eject the strapped bale from the press chamber. Run the compactor again in order to move the press plate to its lower position again. Unhook the loop from the press plate and attach it to the hook at the rear wall of the compactor. Run the compactor once again and return the press plate to its upper position.

- Step 8: Prepare the compactor for a new bale by repeating step 3, 4 and 5 - in section 2.3 – installations of VG-straps.

**Note: There are two alternatives for strapping the bale/tying the VG-straps together:**

1. By using a strapping tool.
2. Simply by tying the VG-strap ends together.

### **3.0 HYDRAULIC SYSTEM**

#### **3.1 Hydraulic system DT-1000B**

##### INCO 5L Mini aggregate, Electric Motor: Bevi 90-4

Insulation class	F- IP 55 / 56
Guaranteed output	1,5 kW (2hk)
Rotation speed	1415 rpm
Rated current	220V-6,5A. 380V-3,7A. 440V-2,8A.
Starting torque	2,4M/A
Starting current	5,3 I/A
Net weight	15,3 Kg
Colour code	RAL 5005

##### Pump HPI 2 ccm, Gear Pump

Adjustable safety valve:	0-315 bar
Hydraulic oil reservoir tank:	5 liters
Flow factor:	3L/min
Two way valve:	Borch
Hydraulic oil:	UNIVIS N32 / Nuto H32 or similar

##### Cylinder DT-1500B - 60/40-700. 180bar.

All cylinders with flange in front. External threads M24x2 on piston rod.

60/40-700 =	60 mm piston head
	40 mm piston rod
	700 mm cylinder stroke

### 3.2 Hydraulic piping diagram

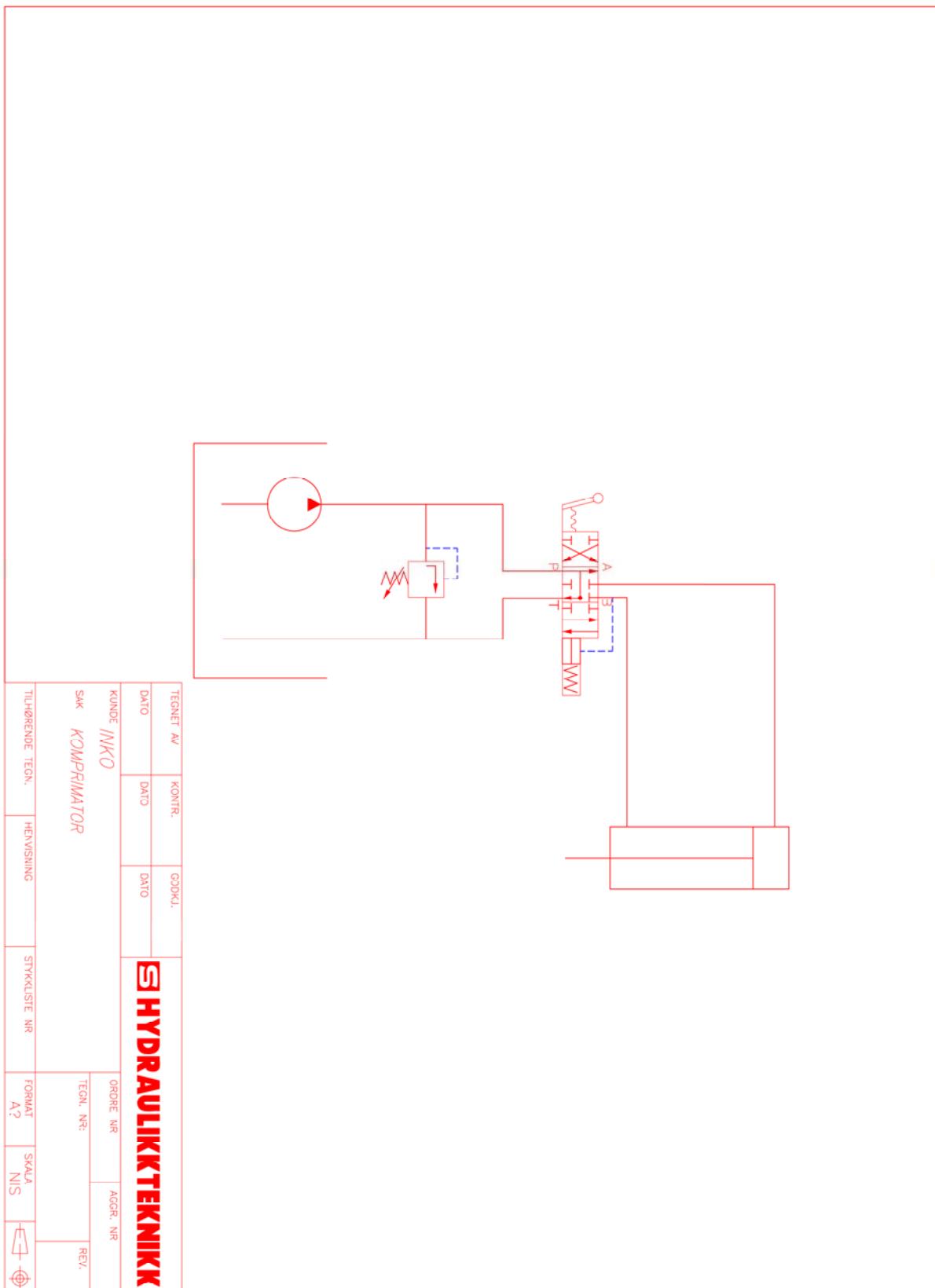


Figure 14. Hydraulic piping diagram

## **4.0 ELECTRIC DIAGRAMS**

## 4.1 400-480V

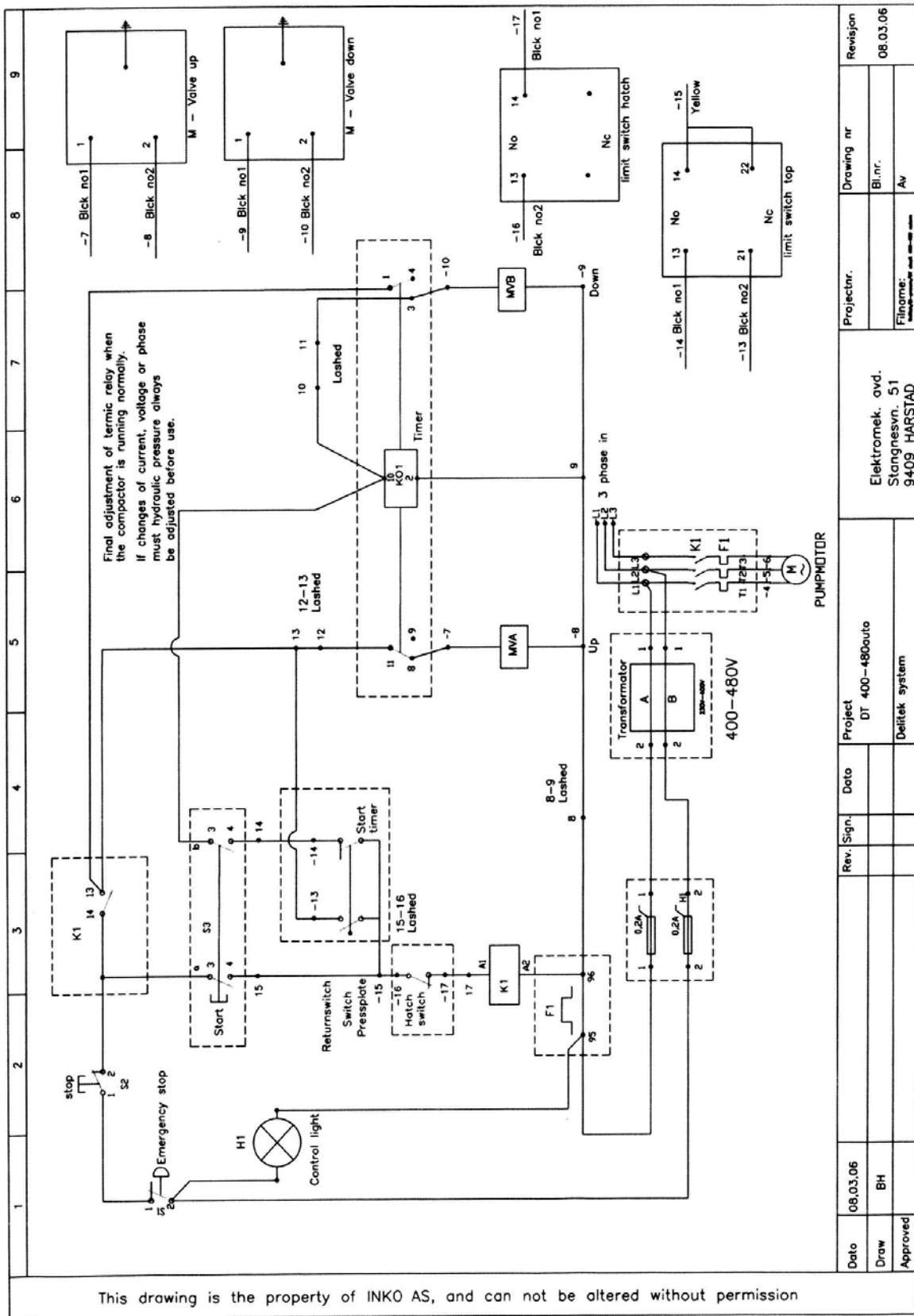


Figure 15. Electric diagram 400-480V

## DT-1000B “Green Ship” Bale Compactor – standard version

## 4.2 220-240V

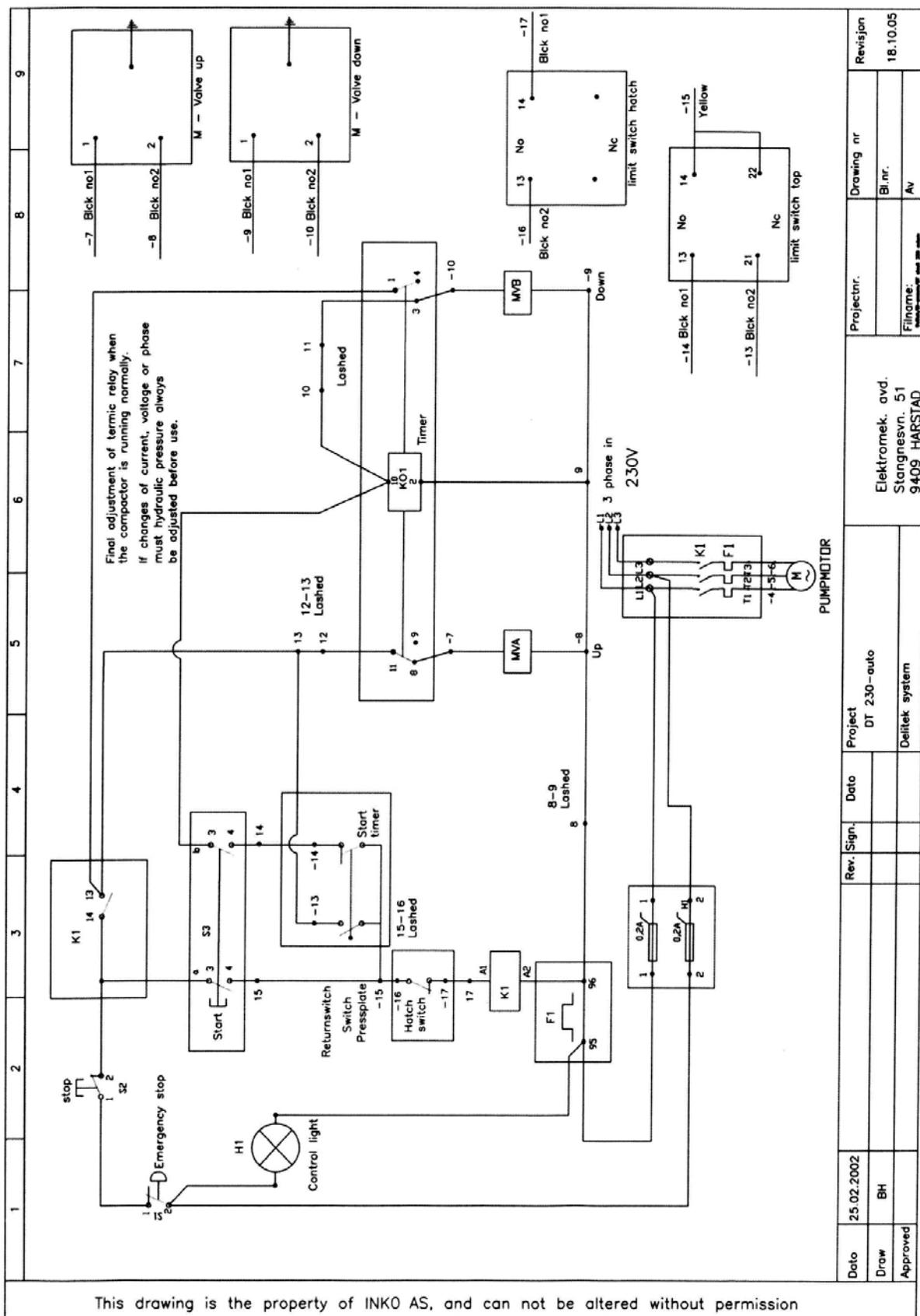


Figure 16. Electric Diagram 220-240V

DT-1000B “Green Ship” Bale Compactor – standard version

#### 4.3 Electric panel, part 1

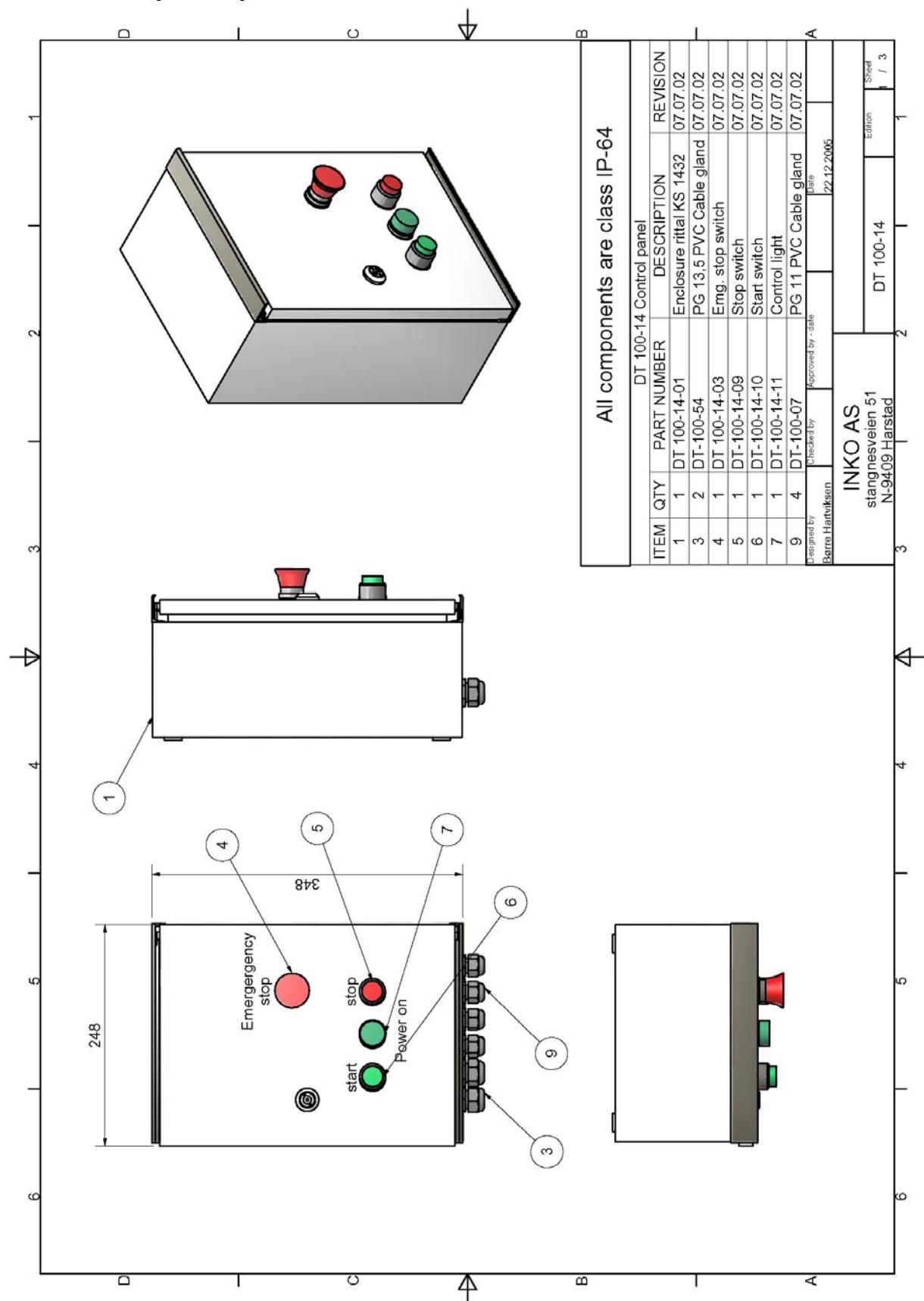


Figure 17. Electric panel, part 1

#### 4.4 Electric panel, part 2

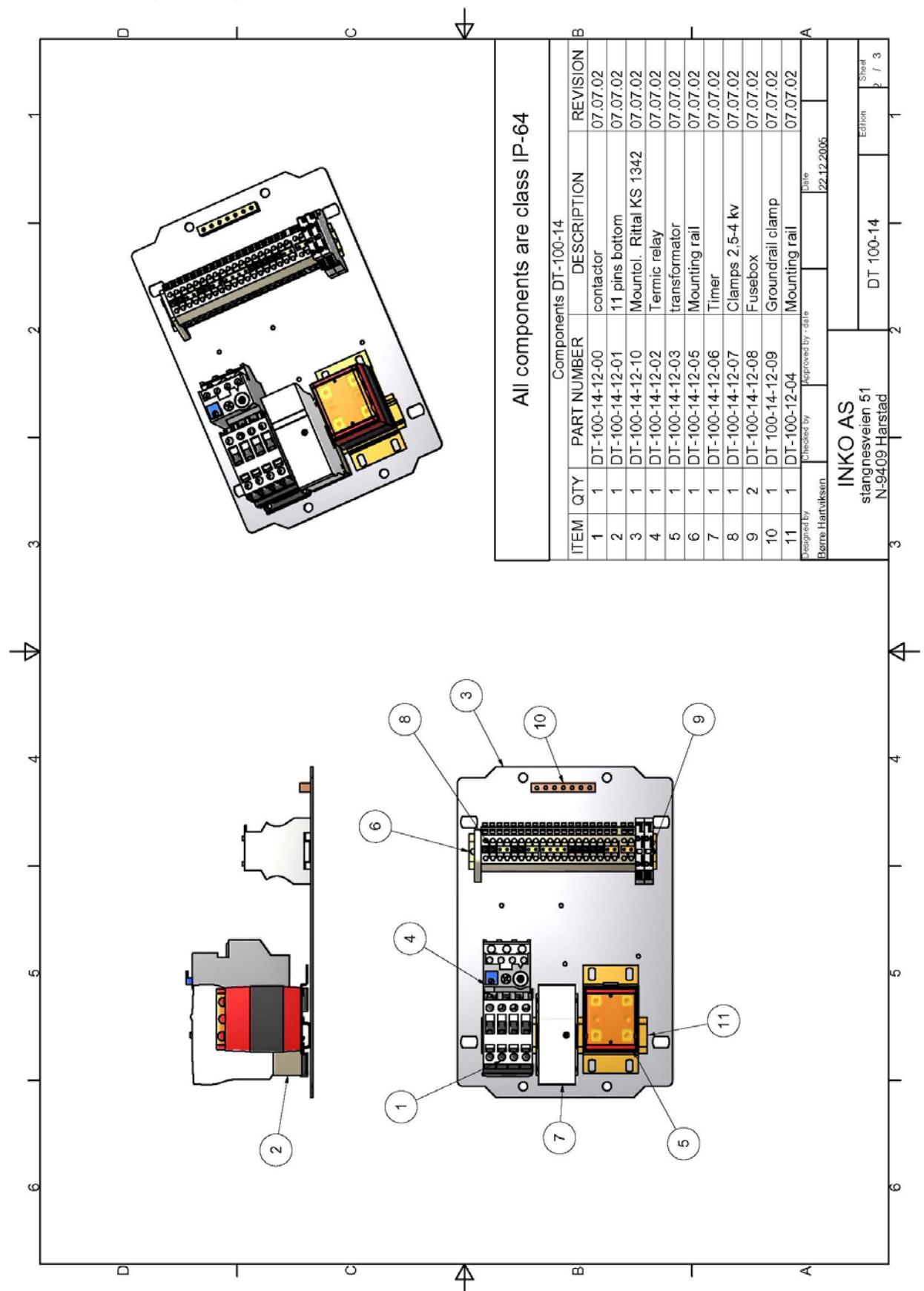


Figure 18. Electric panel, part 2

#### 4.5 Wiring diagram 400V/230V (“Y” or “ $\Delta$ ” configuration)

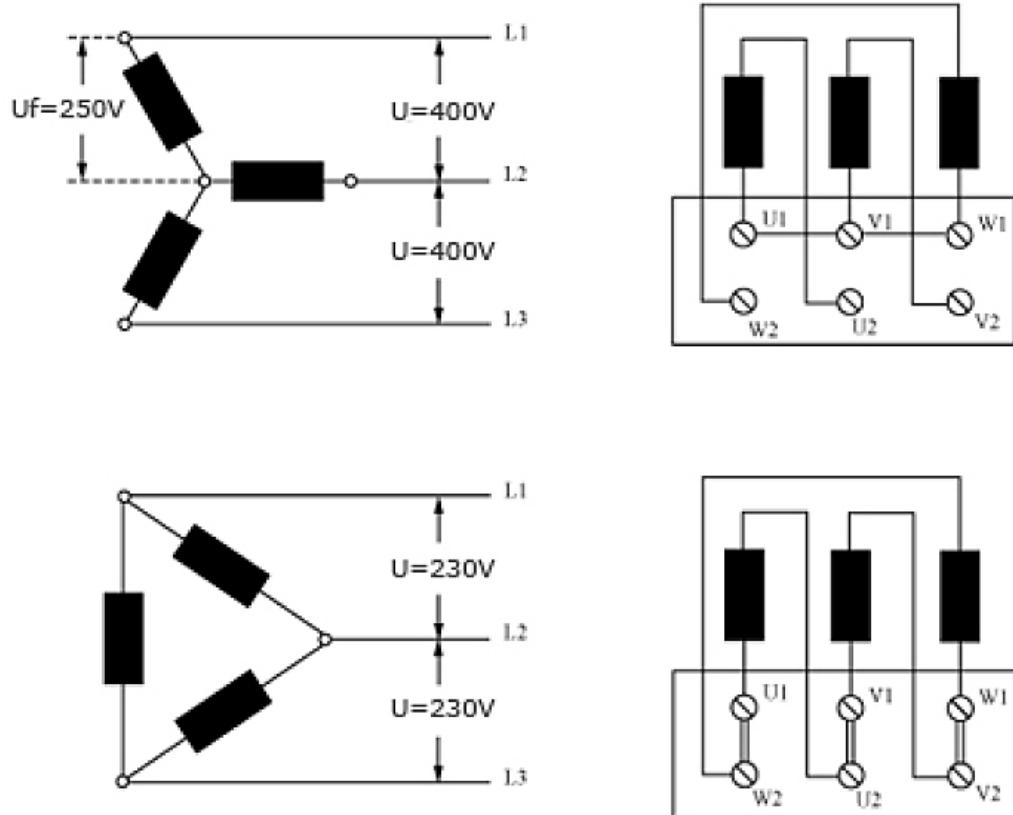


Figure 19. Wiring diagram for el-motor.

## 5.0 SERVICE/MAINTENANCE

### 5.1 Service/Maintenance plan

**NOTE:** For every service interval and other regular controls: function test of safety switches and emergency stop function must be performed by qualified personnel only.

#### After the first 4-6 weeks :

- Check the oil level in the hydraulic oil tank. The oil level should normally be between 55mm and 65mm up on the dipstick.
- Check the el-panel for damages or leaks inside.
- Cables, hydraulic hoses, guide pistons, gaskets and sealing on el-panel and motor are checked and tightened up if necessary
- Check the hydraulic pressure by reading the manometer. See section 1.4 for installation procedure of the manometer and the preset pressure value.

#### After 12 months (Main service every 12 months):

- Repeat the service points for the initial 4-6 months service.
- Disconnect electricity and remove the remove the hydraulic power pack cover and piston cover. See also section 1.5 for this procedure.
- Inspect the hydraulic oil from the hydraulic unit (take a sample). If there are signs of pollution, please change the oil. Use a hydraulic oil similar or in conformance with Nuto Nuto H32/Ess Esso Univis N32.
- Check the hydraulic pump while in operation. Observe whether there are any unusual sounds, vibrations, problems or leaks.
- Check the hydraulic piston and compactor for cracks or damages.
- Check hydraulic hoses for cracks and leaks.
- Function tests of safety switches in hatch and emergency stop function are performed. The compaction cycle is supposed to stop immediately after the hatch is opened.
- Let a certified electrician check all el-connections inside el-panel and on the motor.
- The guide pistons may be lubricated with silicone spray.  
**Note:** Do not use lubrication oil or grease.
- Check the functionality of the gas pistons on the hatch and wheels on container(s).

### 5.2 Surface treatment

In order to keep a nice and shining surface, it is very important that the waste compactor is washed and cleaned with regular intervals, and at least once every second month. This is to avoid discolouring and corrosion.

Wash the compactor with a strong neutral detergent (for industrial use). Acid washing of extra exposed parts may also be done. Be sure to take all necessary precautions and read the data sheet for the detergent and any acid wash very carefully before use. It is recommended to use a high-pressure washer in order to flush the compactor after washing.

**Note:** Avoid flushing directly on the el-locker and el-motor.

## **6.0 TECHNICAL SPECIFICATIONS**

### **6.1 DT-1000B**

Volume	1,5 m <sup>3</sup>
Loading opening	600 mm x 1000 mm
Total height, incl. plunger	2493 mm
External dimensions (W x D x H )	1315 mm x 936 mm x 2493 mm
Length of stroke	700 mm
Compression force	10 tonn
El. Motor	1,5 kW
El. Power	220V/380~440V/480V/690V, 50~60Hz, 16A, 3 phase
Weight	350Kg

## **7.0 SPARE PARTS AND VG-STRAPS**

### **7.1 Ordering information**

Spare parts and VG-straps for the Delitek bale compactor can be ordered from Delitek AS or from any of our agents:

Address:

Delitek AS, Moloveien, N-8432 ALSVAAG, NORWAY

Tel.: + 47 76 13 47 00  
Fax: + 47 76 13 42 77  
E -mail : [mail@delitek.no](mailto:mail@delitek.no)  
URL: <http://www.delitek.no>

### **7.2 Service and technical information**

INKO AS, Stangnesveien 51, N-9408 HARSTAD, NORWAY

Tel.: +47 77 00 26 70,  
Fax: +47 77 00 26 90  
Contact: Mr. Leif Andersen  
E-mail: [technical.delitek@inkoas.no](mailto:technical.delitek@inkoas.no)

## **8.0 WARRANTY**

### **8.1 General conditions**

Delitek AS guarantees that this product is without defects regarding materials and workmanship, for a period of 12 months from original retail purchase date. To obtain warranty service, the purchaser must first contact Delitek AS within the warranty period, in order to obtain information and replacement of parts or unit. All inquiries must be accompanied by a description of the problem and the serial number of the unit (this is engraved on the nameplate found on the right side of the bale compactor). Proof of purchase must be presented in the form of an original invoice or other documentation, which shows that the product is within the warranty period. The warranty does not cover claims for damages due to abuse, neglected maintenance, modifications or attempt of repairs by unauthorized personnel. Delitek AS will not be liable for and denies any responsibility for accidental, indirectly or other damages on amongst other property or personal injuries as the result of wrong use or neglected maintenance of the product.

**See section 7.1 for contact information.**

## 9.0 TROUBLESHOOTING GUIDE

### 9.1 Troubleshooting

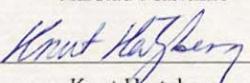
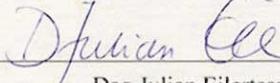
If you experience problems while operating the bale compactor, please use the following table to check for possible causes and solution before contacting Delitek AS/ Service for assistance.

Symptoms	Cause	Solution
The indicator light for “VOLTAGE ON” on the el-panel is not lit and the compactor does not respond when the <b>start</b> button is pressed (see fig. 8, page 10).	No voltage to the unit.	Check if the main el-cable has been unplugged. Check if external fuses may be blown.
	Failure or breaches in main electric cable.	An authorized electrician must inspect the cable and plugs for breaches or failure.
The indicator light for “VOLTAGE ON” on the el-panel does not light, but the compactor starts when the <b>start</b> button is pressed.	The indicator lamp for “VOLTAGE ON” is defect.	Replace the lamp.
The indicator light for “VOLTAGE ON” on the el-panel is lit, but compaction does not start after pressing <b>start</b> button on the el-panel.	The loading hatch is not closed properly and the security switch in the hatch is not activated.	Close the loading hatch properly.
	Solenoid valve or coils on the hydraulic aggregate may be defect.	An authorized electrician must inspect and measure the coils on the solenoid valve block on the hydraulic aggregate in order to verify if the coils or solenoid valves are defect. Contact Delitek AS for spare parts. See chapter. 8.
The compaction force seems to be insufficient or very low.	Problems with the source for the el-supply.	Check that the electricity output connection conforms to the bale compactors specification. For instance 440V/60Hz/3 Phase.
	The electric connection in the el-panel is wrong or out of phase.	An authorized electrician must inspect the bale compactor and make sure that the el-motor rotates counter clockwise when operating. Remove the covering of the el-motor on top of the compactor and make a visually check of the el-motor when operating. If the el-motor turns clockwise, the electricity connection is wrongly connected. The bale compactor will seemingly operate as normal, but will not be able to build up sufficient pressure to do normal compaction. Please re-wire el-connection according to electricity diagram found in the user manual. A qualified electrician must do this. If the el-motor turns counter-clockwise and as indicated by the arrow symbol on the motor, the el-connection is correct.

<b>Symptoms</b>	<b>Cause</b>	<b>Solution</b>
The compaction force seems to be insufficient or very low (continued).	Blocked air-vent/wrong filler cap.	On the hydraulic oil tank: Please check that the air vent/airing on the filling cap are not blocked. A blocked air vent can eventually cause the hydraulic system to malfunction. Alternatively, if the hydraulic oil tank was delivered with an airtight temporary filling cap: replace this with the original dipstick.
	Hydraulic oil level is to low.	Please ensure that the bale compactor contains sufficient hydraulic oil in the hydraulic oil tank found on the hydraulic aggregate. The oil tank must contain 3, 2 liters hydraulic oil or be 3/4 full. (Univis 32). Check the oil level by controlling the dipstick. The oil level should be between 55mm and 65mm up on the dipstick.
	Air pockets in the hydraulic system.	If the bale compactor/hydraulic system have been forced to operate with insufficient hydraulic oil level, air pockets may have occurred in the system. Check and refill oil as described above. Start the bale compactor and run the compaction cycle a few times in order to automatically empty the system for entrapped air.
The piston does not return to its upper position (0-position).	Solenoid valve(s) or coils may be defect.	Coils or solenoid valves must be replaced. Contact Delitek AS.
	The switch on the press-plate may be defect.	Contact Delitek AS and have the switch replaced.
The loading hatch refuse to rest in open position.	One or both of the gas pistons on the hatch are defect.	Contact Delitek AS and order for spare parts. See chapter. 8.

## **10. APPENDIX 1**

### **10.1 DnV Certification**

 <b>DET NORSKE VERITAS</b> <b>STATEMENT OF CONFORMITY</b>
<p><i>Application of:</i> Council Directive 98/37/EC of 22 June 1998, issued as "Forskrift for Maskiner" by the Norwegian Directorate of Labour Inspection.</p> <p><b>Statement no.:</b> AACAAJHI</p> <p>This is to certify that the technical documentation for the product:</p> <p><b>Avfallskomprimatorer og emballasjepresser</b></p> <p><b>Identification :</b> DT-80, DT-100, DT-500, DT-1500, DT-1000B, Dt-1500B, DT-500 COMBI, DT-2000</p> <p><i>Responsible manufacturer</i></p> <p><b>DELITEK AS</b> Havnegata 7, 8430 Myre, Norway Manufactured by INKO AS PB 772, 9487 Harstad, Norway</p> <p><b>complies with the requirements applicable to it</b></p> <p>The manufacturer's Technical Construction File (TCF) and the product has been reviewed and found to comply with the requirements in Annex V, section 3.</p> <p><b>Limitations:</b> Any modifications made to the machine shall immediately be reported to Det Norske Veritas AS in order to examine whether this Certificate remains valid.</p> <p><i>Harstad, 13. November 2002</i> for Det Norske Veritas AS Harstad Maritime  Knut Hertzberg District Manager</p> <p> Dag Julian Eilertsen</p> <p><i>Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this receipt invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 85/374/EEC.</i></p>

## **11. APPENDIX 2**

### **11.1 Spare part list**

Part Number	Description
DT 100 - 34	Cover for hydraulic unit
DT 100 - 56	Limit switch, press plate
DT 100 - 03	Gas damper for hatch AISI 304
DT 100 - 19	Hinge AISI 304 complete
DT 100 - 36 - 01	Wheel (rubber), fixed action
DT 100 - 37 - 01	Wheel (rubber), revolving
DT 100 - 600 - 65	Hydraulic piston, 600mm stroke
DT 100 - 700 - 65	Hydraulic piston, 700mm stroke
DT 100 - 900 - 65	Hydraulic piston, 900mm stroke
DT 100 -06 - Rev. A	Pipe bushing nylon, for cylinder guides Ø 48,3
DT 100 - 06	Pipe bushing nylon, for cylinder guides Ø 50
DT - 100 - 14 - 10	Impulse switch start
DT - 100 - 14 - 09	Impulse switch Stop
DT 100 - 14	EL panel 90 VA trafo complete
DT 100 - 05 - 04	Contact magnetic coils
DT 100 - 14 - 12 - 00	Contactor LCID09P99A
DT 100 - 14 - 11	Control lamp
DT 100 - 01 - 05 -06	Magnetic coil ATOS Ø 17,7
DT 100 - 01 - 05 -02	Magnetic coil Diplomatic Ø 20,5
DT 100 - 01	Hydraulic aggregate, complete
DT 100 - 01 -05 -00	Bracket for magnetic valve block
DT 100 - 01 - 00	El-motor IP 55 1,8 KW
DT -100 -03 -00	El-motor IP 56
FR60B - 400230	Noratel Trafo 40 VA 400 - 415 - 440/230 V
FR60B - 460230	Noratel Trafo 90 VA 460 - 480 - 500/231 V
FR60B - 660230	Noratel Trafo 90 VA 660- 690/230V
DT 100 - 14 - 03	Emergency switch complete with socket
DT 100 - 59	Offshore brake system
DT 100 - 01 - 01	Pump 2 ccm incl.. tank 5 liter
DT 100 - 55	Safety switch for hatch
DT 100 - 29	Covering for 600 cylinder
DT 100 - 30	Covering for 700 cylinder
DT 100 - 33	Covering for 900 cylinder
DT 100 - 01 - 02	Hydraulic oil tank, 5l
DT 100 - 14 -12 - 06	Timer relay
DT 100 - 01 - 05	Valve block complete with magnetic coils
DT-500-700-94	Complete hydraulic hose set for DT-1000B Bale compactor